



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1830  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,020	09/11/2003	Gregory Shirin	15437-0578	8580

45657 7590 03/09/2006

HICKMAN PALERMO TRUONG & BECKER, LLP  
AND SUN MICROSYSTEMS, INC.  
2055 GATEWAY PLACE  
SUITE 550  
SAN JOSE, CA 95110-1089

EXAMINER

MYINT, DENNIS Y

ART UNIT

PAPER NUMBER

2162

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/662,020	<b>Applicant(s)</b> SHIRIN ET AL.	
	<b>Examiner</b> Dennis Myint	<b>Art Unit</b> 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/11/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-39 have been examined.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Aziz et al. (U.S. Patent Application Publication Number 2003/0126265).

As per claim 1, Aziz et al. is directed to a method comprising:

determining, by a grid establishment component (Aziz et al., Figure 2 "CONTROL PLANE" 206 and Paragraph 0060), from a plurality of nodes (Aziz et al., Paragraph 0058, i.e. "a large number of computing elements CPU1, CPU2....." and Figure 2 "CPU1", "CPU2"), a set of grid nodes to include in a resource grid (Aziz et al., Figure 2 local computing grid 208 and Paragraph 0058, i.e., "The local computing grid 208 is composed of a large number of computing elements"), wherein each grid node provides zero or more resources (Aziz et al., Paragraph 0075, i.e. "A particular computing element may perform different roles as it is brought into and out of various VSFs."); and

establishing, by the grid establishment component, the resource grid (Aziz et al., Paragraph 0067, 0065, 0066, and 000055, i.e. "create a variety of server farm configurations."), wherein

establishing comprises:

configuring each grid node to enable that grid node to participate as part of the resource grid (Aziz et al., Paragraph 000055 and 0065); and

establishing one or more grid masters (Aziz et al., Paragraph 0075 "web load balancer", Figure 3 "LB/FIREWALL" 302, and Paragraph 0083) to manage access to the resources provided by the grid nodes (Aziz et al., Paragraph 0085), such that the resource grid formed by the grid nodes behaves as a single pool of resources accessible through the one or more grid masters (Aziz et al., Paragraph 0062, Figure 3, and Paragraph 0085).

As per claim 2, Aziz et al. is directed to the method of claim 1, wherein each grid node has a grid facilitation agent operating thereon (Aziz et al. Paragraph 0071, i.e. "storage zone on the SAN". Note that a set of computing elements are coupled to a subset of SAN storage (Paragraph 0061) and said storage zone includes software, i.e. grid facilitation agent, which is run when a computing agent is rebooted (Paragraph 0061) during the process to bring in said computing element into the computing grid.), and wherein configuring a grid node to enable that grid node to participate as part of the resource grid comprises:

Art Unit: 2162

deploying a grid participation module to the grid facilitation agent operating on the grid node (Aziz et al., Paragraph 0071 and 0072. By rebooting a computing element (node), software, which resides on a portion of the storage zone of the SAN which is coupled to the computing element, is evoked and said software (a grid facilitation agent with grid participation module) prepares the computing module (node) to participate in the computing grid (Paragraph 0072)); and

instructing the grid facilitation agent to run the grid participation module on the grid node to enable the grid node to participate as part of the resource grid (Aziz et al., Paragraph 0072).

As per claim 3, Aziz et al. is directed to the method of claim 2, wherein determining the set of grid nodes comprises:

determining which of the plurality of nodes has a grid facilitation agent operating thereon (Aziz et al., Paragraph 0061-0063 and Paragraph 0071-0072. Note that, in the method and system of Aziz et al., control plane (grid establishment component) determines which nodes would be in the grid by rebooting nodes and selecting a specific software (grid facilitation agent with grid participation module) to run on those nodes during the reboot process (Paragraph 0071-0072). Thus the method and system of Aziz et al. preempts the step of determining which of the plurality of nodes has a grid facilitation agent operating thereon.); and

selecting those nodes as the grid nodes (Paragraph 0061-0062 and 0071-0072).

As per claim 4, Aziz et al. is directed to the method of claim 1, wherein configuring a grid node to enable that grid node to participate as part of the resource grid comprises:

causing the grid node to execute a grid facilitation agent thereon (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072);

deploying a grid participation module to the grid facilitation agent executing on the grid node (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072); and

instructing the grid facilitation agent to run the grid participation module on the grid node to enable the grid node to participate as part of the resource grid (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072).

As per claim 5, Aziz et al. is directed to the method of claim 4, wherein causing the grid node to execute the grid facilitation agent comprises:

causing the grid node to reboot using an operating system image obtained from a component separate from the grid node, wherein the operating system image comprises the grid facilitation agent (Aziz et al., Paragraph 0071, i.e. "the computing element is powered down or rebooted " and "a bootable image of the operating system").

As per claim 6, Aziz et al. is directed to the method of claim 4, wherein causing the grid node to execute the grid facilitation agent comprises:

instructing the grid node, via a privileged port of the grid node (Aziz et al., Paragraph 0065, i.e. "Devices can only be configured through such control ports or interfaces."), to reboot using an operating system image obtained from a component separate from the grid node ("When a computing element is powered back up, a

Art Unit: 2162

different portion of storage zone on the SAN.”), wherein the operating system image comprises the grid facilitation agent (Aziz et al., Paragraph 0071 and 0065).

As per claim 7, Aziz et al. is directed to the method of claim 6, wherein determining the set of grid nodes comprises:

determining to which of the plurality of nodes the grid establishment component has access to a privileged port (Aziz et al., Paragraph 0065, “control ports”); and selecting those nodes as the grid nodes (Aziz et al., Paragraph 0065).

As per claim 8, Aziz et al. is directed to the method of claim 1, wherein configuring a grid node to enable that grid node to participate as part of the resource grid comprises:

deploying a grid facilitation agent to an operating system running on the grid node (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072);

instructing the operating system to run the grid facilitation agent on the grid node (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072);

deploying a grid participation module to the grid facilitation agent running on the grid node (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072); and

instructing the grid facilitation agent to run the grid participation module on the grid node to enable the grid node to participate as part of the resource grid (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072).

As per claim 8, Aziz et al. is directed to the method of claim 8, wherein each of the plurality of node has an operating system running thereon (Aziz et al., Paragraph 0071), and wherein determining the set of grid nodes comprises:

determining, for each of the plurality of nodes, whether the grid establishment component has sufficient privileged access to the operating system running on that node to deploy the grid facilitation agent to that operating system (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072); and

in response to a determination that the grid establishment component has sufficient privileged access to that operating system, selecting that node as one of the grid nodes (Aziz et al., Paragraph 0061-0062 and Paragraph 0071-0072).

As per claim 10, Aziz et al. is directed to the method of claim 1, wherein determining comprises: receiving a set of information from an administrator that specifies the set of grid nodes (Aziz et al., Paragraph 0052-0053, "control plane" and "supervisory purposes").

As per claim 11, Aziz et al. is directed to the method of claim 1, wherein establishing the resource grid is implemented by the grid establishment component without user intervention (Aziz et al. 0055).

As per claim 12, Aziz et al. is directed to the method of claim 1, wherein establishing one or more grid masters comprises: establishing the grid establishment component as a grid master (Aziz et al., Paragraph 0051-0055, "control plane" and Aziz et al., Paragraph 0075 "web load balancer").

As per claim 13, Aziz et al. is directed to the method of claim 1, wherein establishing one or more grid masters comprises: establishing at least one of the grid nodes as a grid master (Aziz et al., Paragraph 0051-0055, "control plane" and Aziz et al., Paragraph 0075 "web load balancer").



Art Unit: 2162

Claim 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26 are rejected on the same basis as claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 respectively.

Claim 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, and 39 are rejected on the same basis as claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 respectively.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30AM-5:30PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint

AU-2162

  
JOHN E. BREENE  
SUPERVISOR  
TECHNICAL CENTER